Application No. 09/973,762
Amdt. dated July 10, 2003
Reply to Office Action of April 10, 2003
Docket No. 8026-1008

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): In a method of improving a transmission characteristic of an xDSL system that implements high-speed data communication over existing copper telephone line wires connecting an a telephone office and a subscriber, a testing system installed in an a telephone office proximate a main distribution frame polls pulls, before connection of a subscriber telephone line to said xDSL system, said subscriber telephone line at an outside line of an xDSL circuit, measures a cross-talk noise characteristic of said subscriber telephone line, and prevents, if said cross-talk noise characteristic is of high level, said subscriber telephone line from being connected to said xDSL circuit,

wherein the measured cross-talk characteristic is cross-talk existing on the subscriber telephone line due to interference from other subscriber telephone lines.

Claim 2 (currently amended) The method as claimed in claim 1, wherein said testing system transforms a level of crosstalk noise on the subscriber <u>telephone</u> line to noise spectrum data by FFT (Fast Fourier Transform) and compares said noise

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spectrum data with a template for noise level decision, which is weighted at a subject frequency, to thereby determine whether or not said subscriber telephone line is usable, said measurement of the cross-talk is made without injecting a test signal onto the subscriber telephone line under test.

Claim 3 (currently amended): A system for measuring a transmission characteristic of an xDSL system that implements high-speed data communication over existing copper telephone line wires connecting an a telephone office and a subscriber, said system comprising:

pulling polling means included in an outside telephone line of an xDSL circuit installed in an office for pulling polling a subscriber telephone line;

noise level measuring means for measuring a <u>an existing</u> level of cross-talk noise on the subscriber line; and

decision means for determining, based on the level of cross-talk noise measured, whether or not the subscriber line is usable.

Claim 4 (currently amended): The system as claimed in claim 3, wherein said pulling polling means comprises:

an MDF Ψ (Main Distribution Frame) connected to terminals T and R of the outside line at a subscriber side; and

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relays connected to said MDF and connecting the terminals T and R to test terminals.

Claim \setminus 5 (currently amended): The system as claimed in claim 4, wherein\said noise level measuring means comprises:

a voltage measuring circuit for measuring a an existing cross-talk noise voltage input via said relays;

(Analog-to-Digital Converter) circuit for an ADC converting cross-talk\noise voltage measured to a digital signal; and

(Fa****st Fourier Transform) circuit transforming the digital \signal to noise spectrum data.

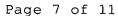
Claim 6 (original): The system as claimed in claim 5, wherein said decision means \comprises means for comparing the noise spectrum data with a template for noise level decision to thereby determining whether or not the subscriber line is usable.

Claim 7 (currently amended): The system as claimed in claim 3, wherein said noise level measuring means comprises:

a voltage measuring circuit for measuring a an existing cross-talk noise voltage input via said relays;







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an ADC (Analog-to-Digital Converter) circuit for converting cross-talk noise voltage measured to a digital signal; and

an FFT (Fast Fourier Transform) circuit for transforming the digital signal to noise spectrum data.

Claim 8 (original): The system as claimed in claim 7, wherein said decision means comprises means for comparing the noise spectrum data with a template for noise level decision to thereby determining whether or not the subscriber line is usable.